FIG. 1A

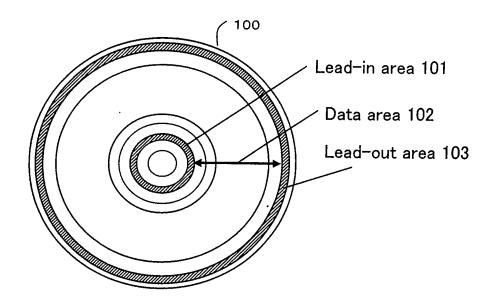


FIG. 1B

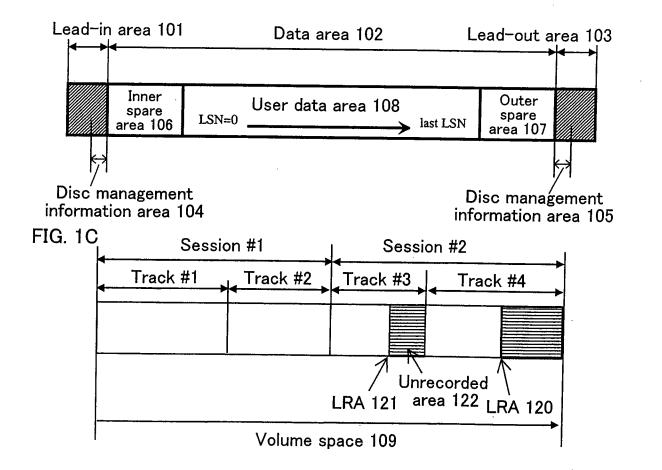


FIG. 2A

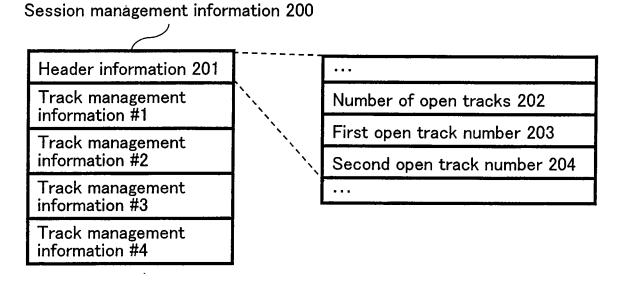


FIG. 2B

Track management information 210

Session start information 211 Track start location information 212	Last recorded address information within track (LRA) 213
--	--

FIG. 2C

Space bitmap management information 220

Header information 221

Managed area information 222

Space bitmap information 223

FIG.3

Disc structure information 1100

General information 1101
Replacement management information list location information 1102
User area start location information 1103
User area end location information 1104
Spare area information 1105
Recording mode information 1106
Last recorded address information 1107
Disc management information area information 1107b
Spare area management information 1108
Session management information location information 1109
Space bitmap management information

FIG.4

100b

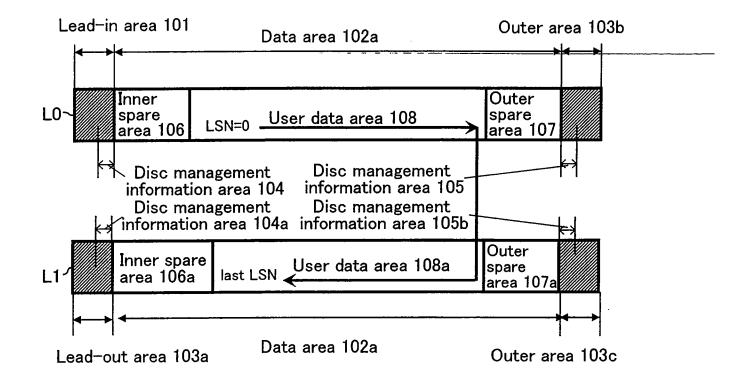


FIG.5A

Replacement management information list 1000

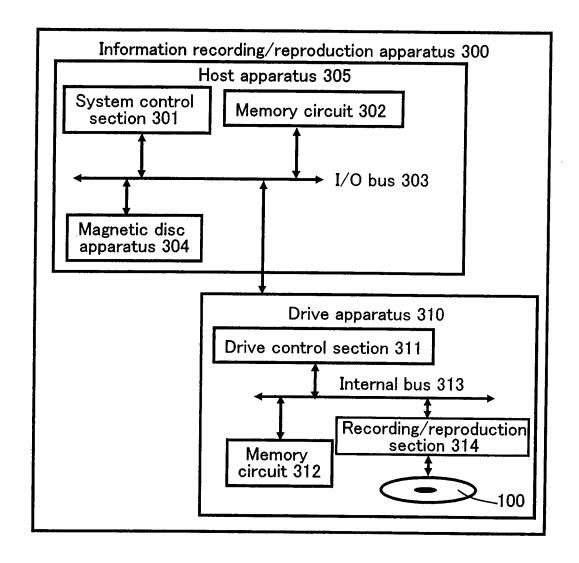
Header information 1001
Replacement management information #1
Replacement management information #2
Replacement management information #3
...
Terminator information
00h

FIG.5B

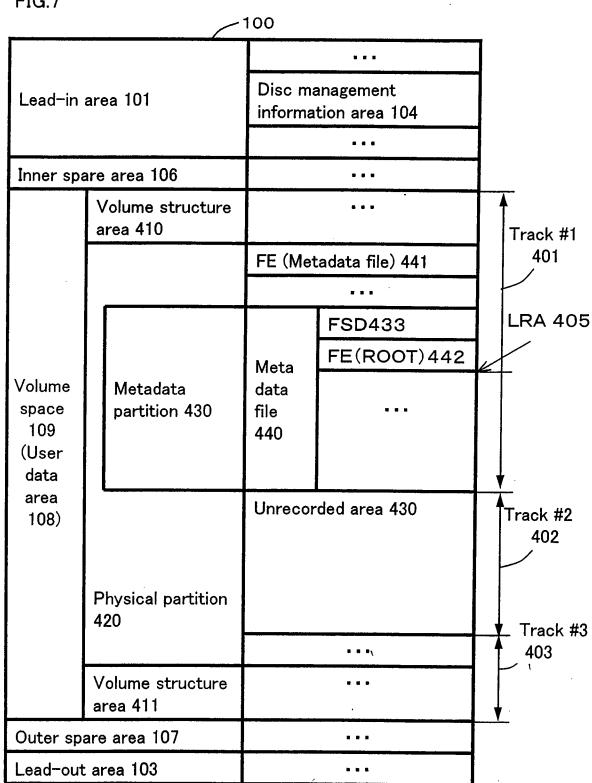
Replacement management information 1010

Status information 1011	Original location information 1012	Replacement location information 1013

FIG.6







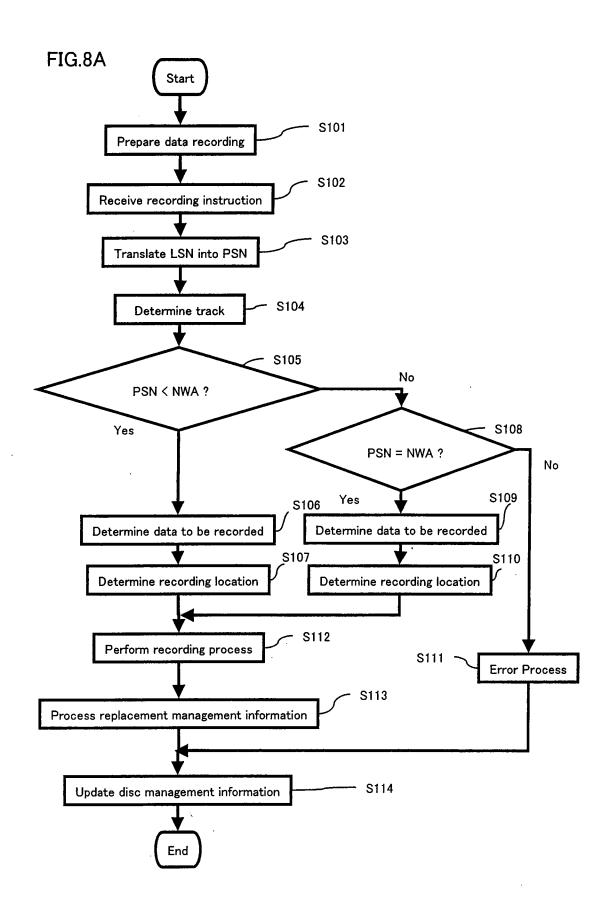
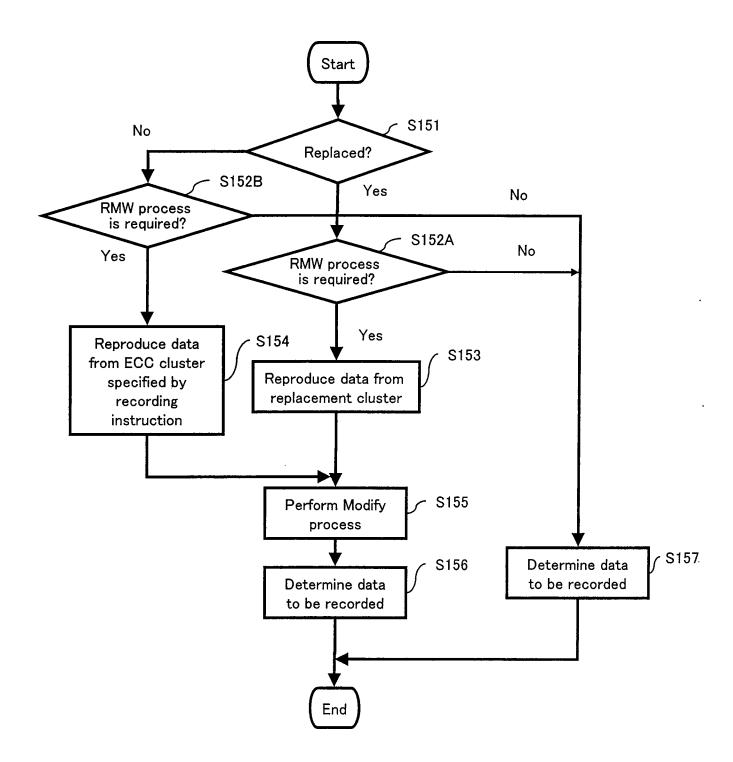
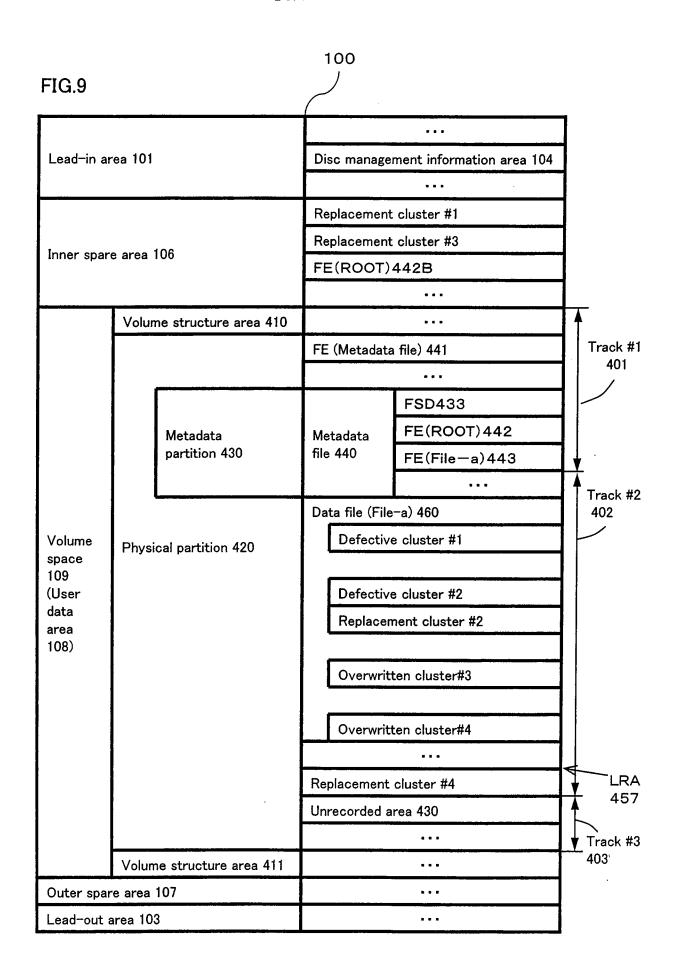


FIG.8B





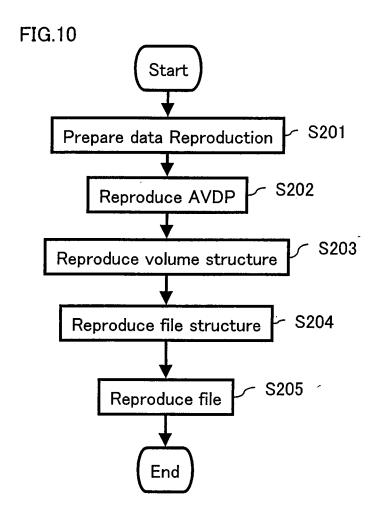


FIG.11 Replacement management information 1010B

Statu	Status information 1011		Original location information 1012	Replacement location	Туре
Flag1	Flag2	Flag3	mormation 1012	information 1013	
0	0	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in Spare area)	(1)
0	0	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in Spare area)	(2)
0	0	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in Spare area)	(3)
0	1	00	Defective cluster or Overwritten cluster location information	Replacement cluster location information (in User data area)	(4)
0	1	01	Defective clusters or Overwritten clusters start location information	Replacement cluster start location information (in User data area)	(5)
0	1	10	Defective clusters or Overwritten clusters end location information	Replacement cluster end location information (in User data area)	(6)
1	0	00	Defective cluster location information		(7)

Flag1

For replacement: 0 For defect: 1

Flag2
Replace in Spare area or no replacement cluster: 0
Replace in User data area: 1

Flag3

Single cluster : 00 Contiguous clusters (start location) : 01 Contiguous clusters (end location) : 10

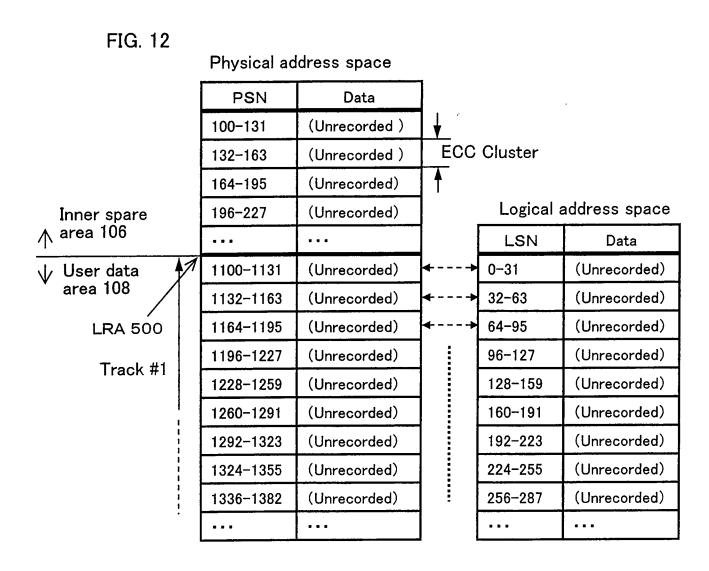
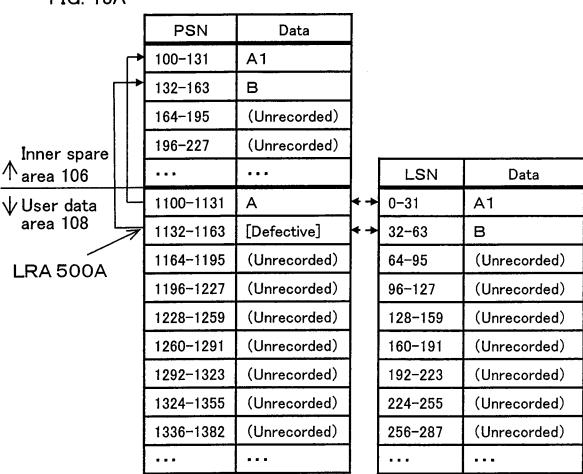


FIG. 13A



1000A FIG. 13B Original Replacement Status information location location 511 0 00 1100 100 512 0 1132 132 0 00

FIG. 14A

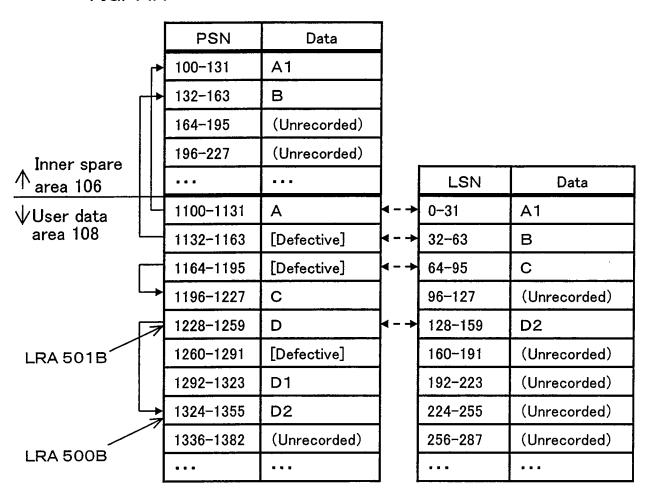


FIG. 14B 1000B Status Original Replacement information location location **§1**§ 514A

FIG. 15A

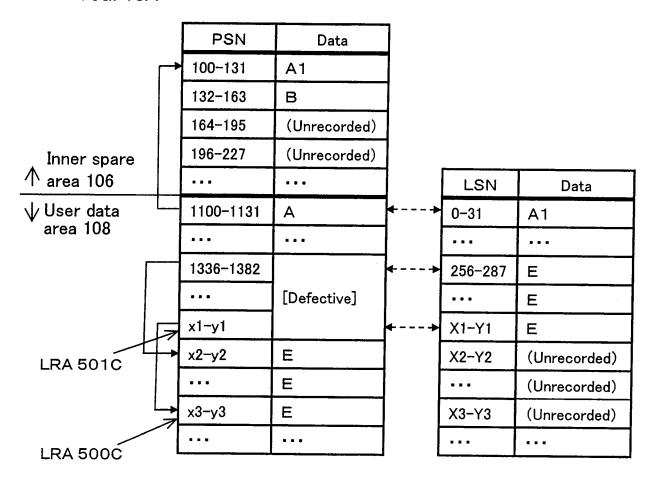
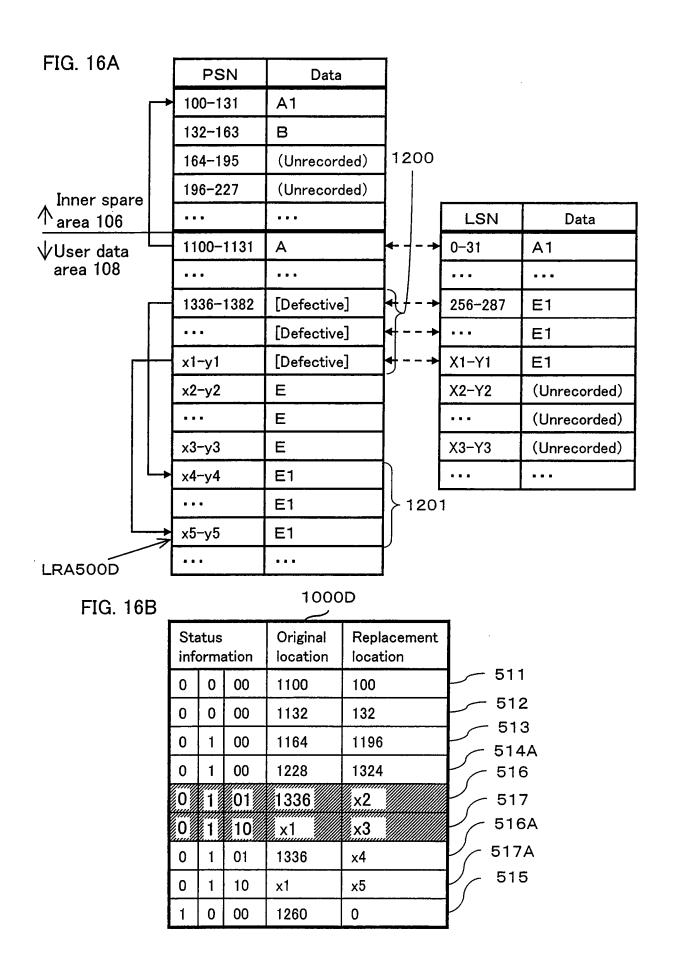


FIG. 15B 1000C Original Status Replacement information location location 512 ر 一 514A **-** 516 **x2** х1 хЗ



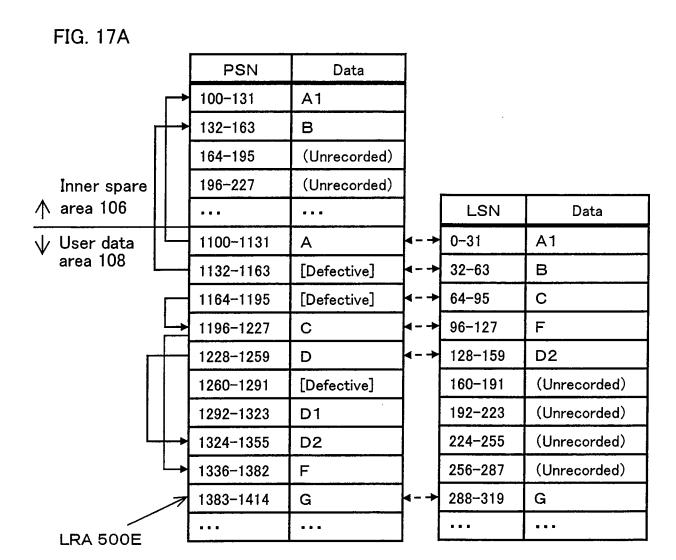
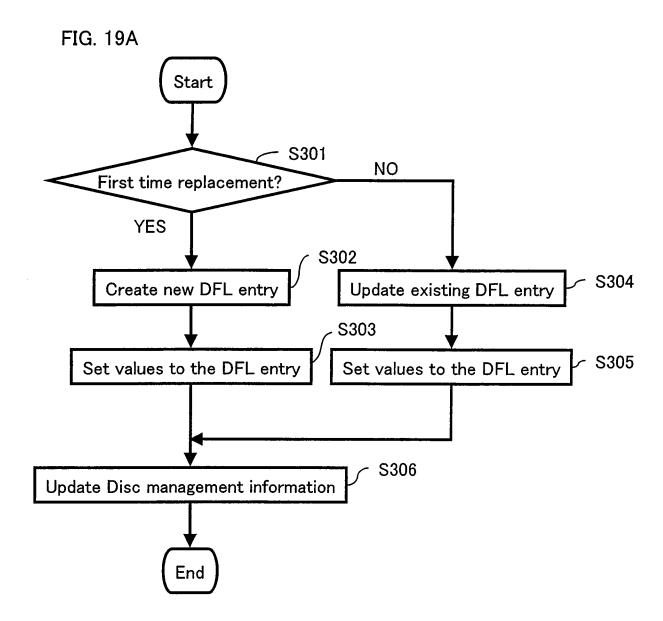


FIG. 17B	_			1000E	E	_
		atus orm	ation	Original location	Replace ment location	
	0	0	00	1100	100	511
	0	0	00	1132	132	512 سر 5 10
	0	1	00	1164	1196	513 518
	0	1	00	1196	1336	514A
	0	1	00	1228	1324	515
	1	0	00	1260	0	γ

FIG. 18

DFL entry 2010

Status 1	Defective cluster	Status 2	Replacement cluster
2011A	first PSN 2012	2011B	first PSN 2013



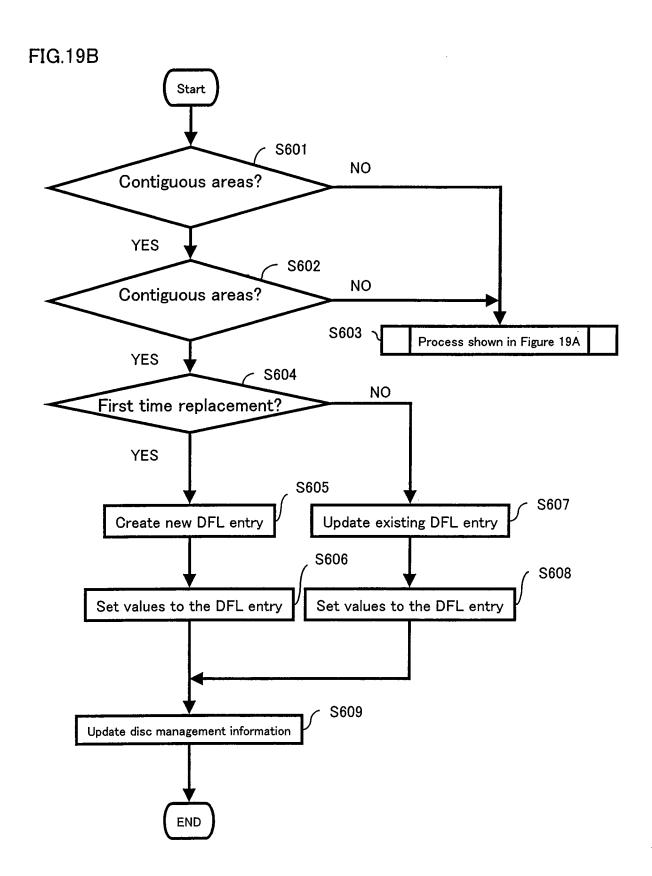


FIG. 20A

	PSN	Data]		
	• • •	•••		LSN	Data
	1000-1131	A0	+ +	0-31	AO
LRA	1132-1163	(Unrecorded)		32-63	(Unrecorded)
	1164-1195	(Unrecorded)]	64-95	(Unrecorded)
	1196-1227	(Unrecorded)		96-127	(Unrecorded)
	1228-1259	(Unrecorded)		128-159	(Unrecorded)
	1260-1291	(Unrecorded)		160-191	(Unrecorded)
	1292-1323	(Unrecorded)		192-223	(Unrecorded)
User data ↑ area 108 ↓ Outer spare	1324-1355	(Unrecorded)		224-255	(Unrecorded)
	•••			•••	
	x10-y10	***]		
area 107	•••	• • •			

FIG. 20B

Header information 1001

FIG. 21A

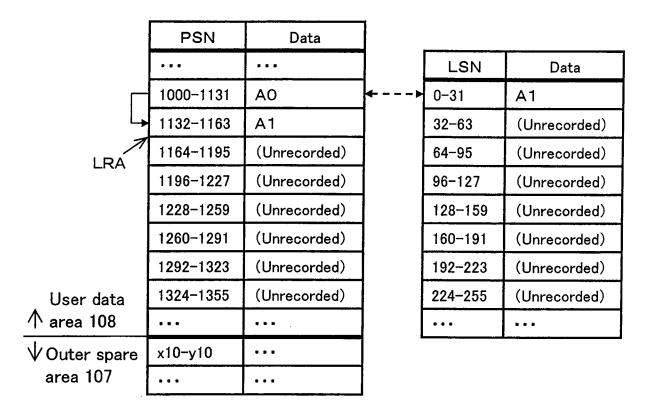


FIG. 21B

Header				
0000	1000	0000	1132	2100A

FIG. 22A

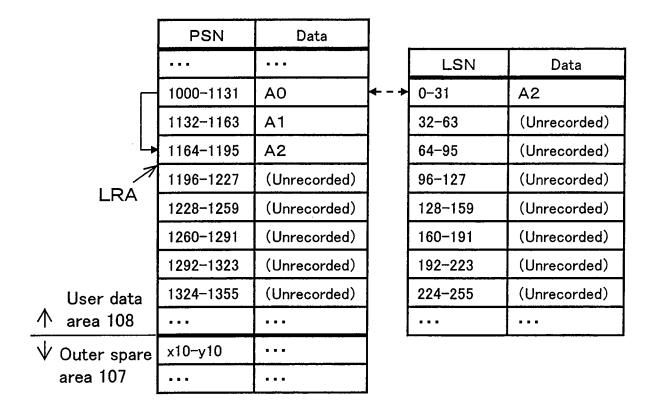


FIG. 22B

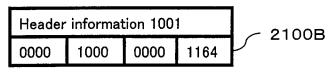


FIG. 23A

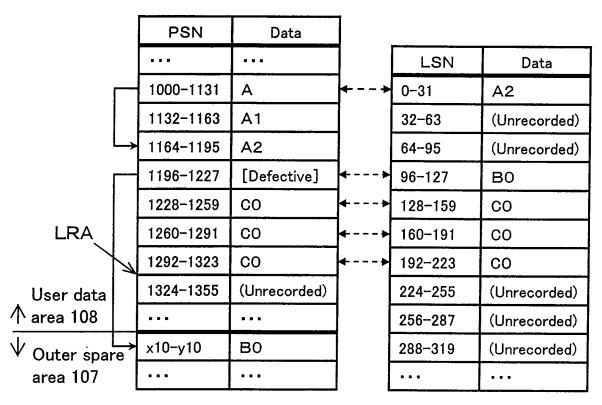


FIG. 23B

Heade				
0000	1000	0000	1164	21008 حر
0000	1196	0000	x10	2101A

FIG. 24A

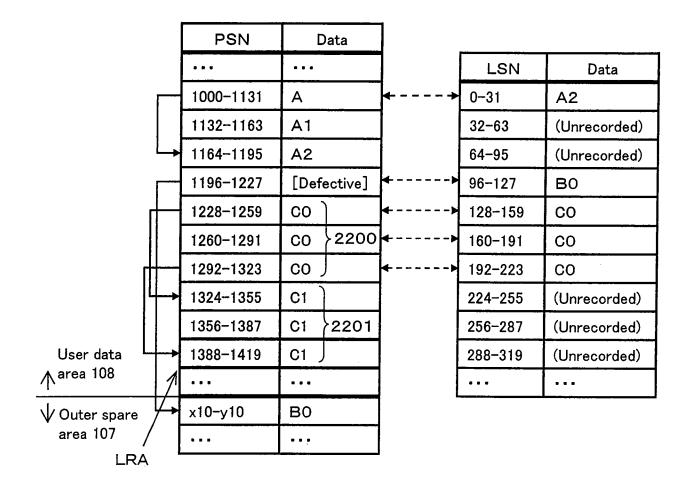


FIG. 24B

i	11 1	7			
	Header	' informa	tion 1001		01000
	0000	1000	0000	1164	2100B
	0000	1196	0000	x10	∠ 2101A
	0000	1228	0001	1324	2102A
	0000	1292	0010	1388	2103A

FIG. 25

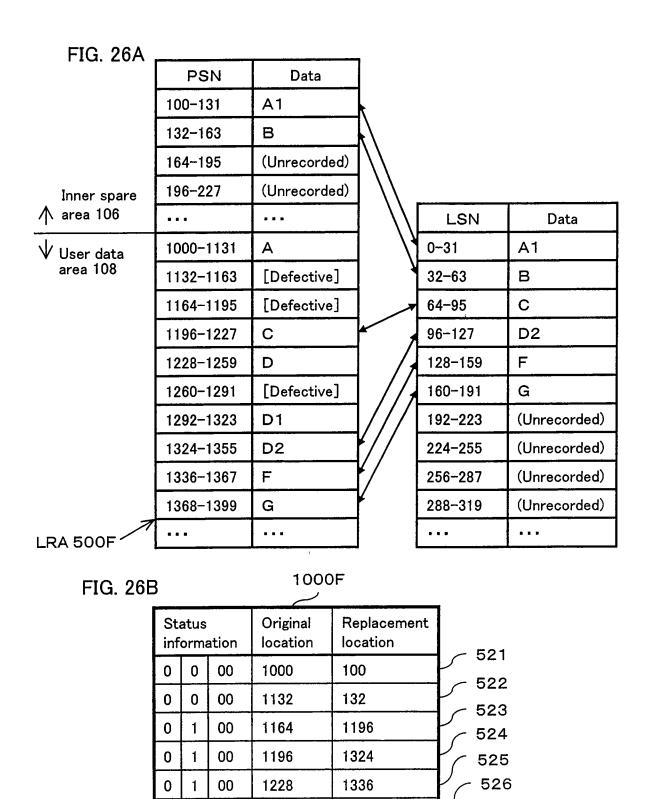
3210

Session start information 211

Track start location information 212

Last recorded address information within track (LRA) 213

Last recorded logical address information within track 3214



0 3 00

1 ※0 ②

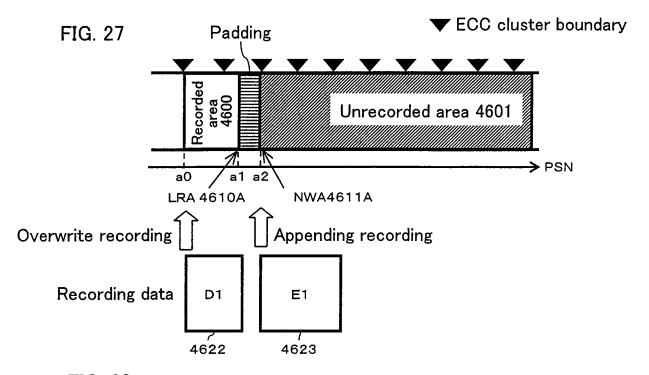
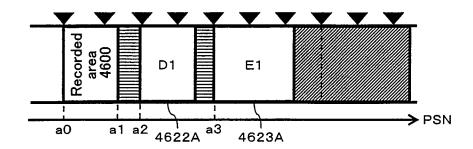
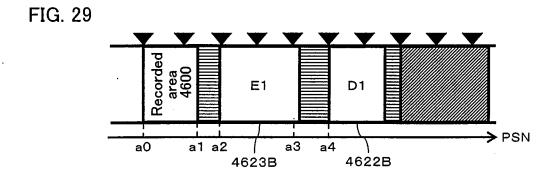


FIG. 28





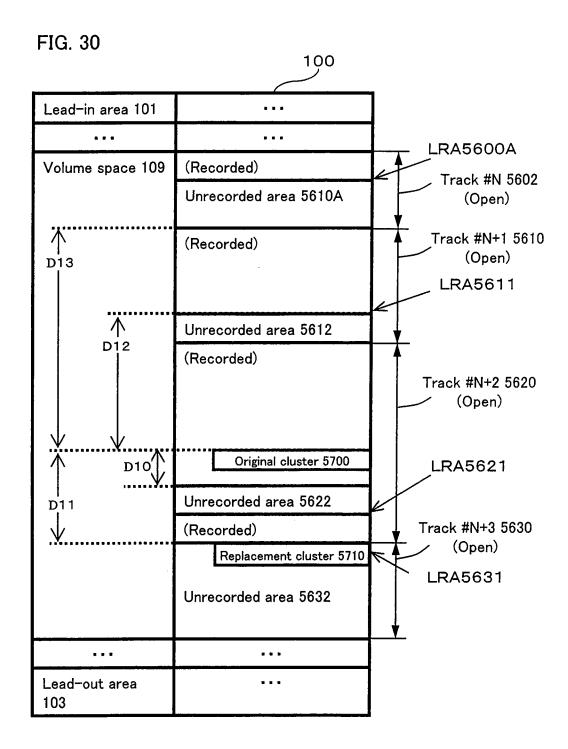


FIG. 31

FIG. 31			1		
Lead-in a	rea		Disc mana	gement structure 2	
				•••	
Spare are	а			• • •	
	Volume structure area 3			•••	
			FE (Metada	ata file) 7a	
		Metadata partition 5a		FSD12	
				FE(ROOT)13	
			Metadata file 6a	FE(Dir-A)	
				FE(Dir-B)	
				FE(File-a)	
Volume				FE(File-b)	
space 2				Unrecorded area 11a	
:		, 	FE (Metada	ata mirror file) 7b	
		Metadata partition 5b	Metadata mirror	(Duplication of Metadata file 440)	
			file 6b	Unrecorded area 11b	
			Data file (F	ïle−a) 8	
	Pł	nysical partition 4	Data file (F	ïle−b) 9	
			Unrecorded	d area 11c	
		olume structure ea 3b			

FIG. 32

				• • •	
Lead-in a	rea		Disc management structure 2		
				• • •	
Spare are	ea 1	7	FE(ROOT)	16	
	•	olume structure rea 3		•••	
			FE (Metadat	a file) 7a	
		Metadata partition 5a		FSD12	
			Metadata file 6a	FE(ROOT)13	
				FE(Dir-A)	
				FE(Dir-B)	
				FE(File-a)	
				FE(File-b)	
Volume				FE(File-c)14	
space 2				Unrecorded area 11a	
			FE (Metadata	a mirror file) 7b	
		Metadata	Metadata	(Duplication of Metadata file 440)	
		partition 5b	mirror file 6b	Unrecorded area 11b	
			Data file (File	e−a) 8	
	PI	nysical partition	Data file (File	e−b) 9	
	42	•	Data file (File-c) 15		
			Unrecorded a	area 11c	
		olume structure ea 3b		•••	

FIG. 33A

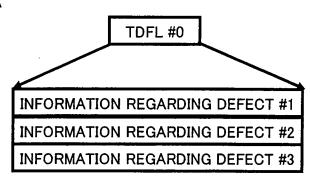


FIG. 33B

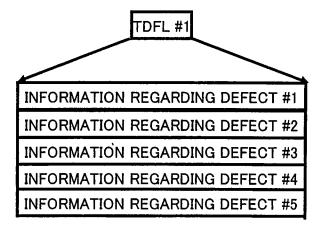


Fig.34

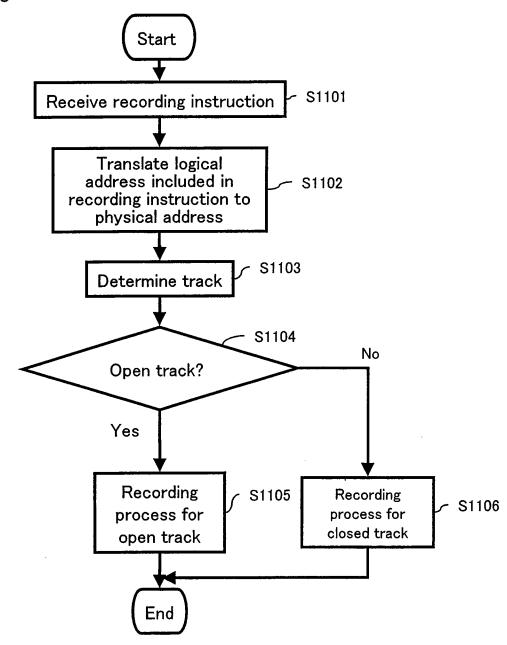


Fig.35A

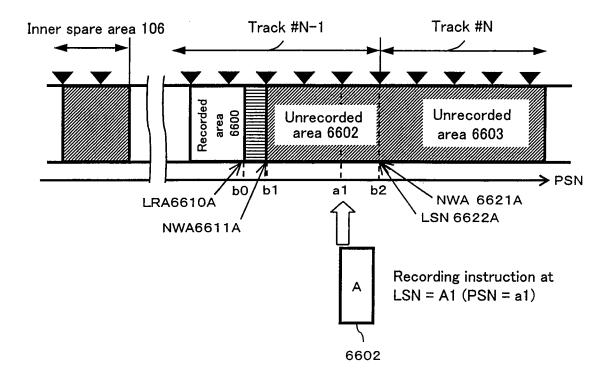


Fig.36A

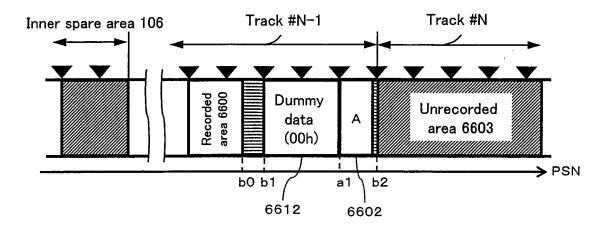


Fig.37A

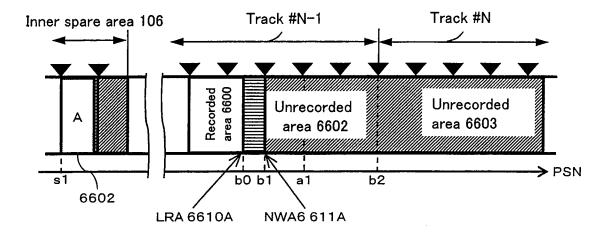
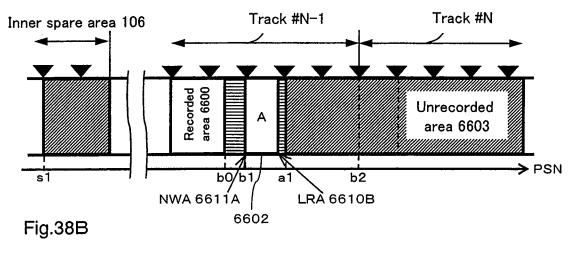


Fig.37B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	6615
0000	a1	0000	s1	Y

Fig.38A



Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	6616
0000	a1	0000	b1	Y

Fig.39A

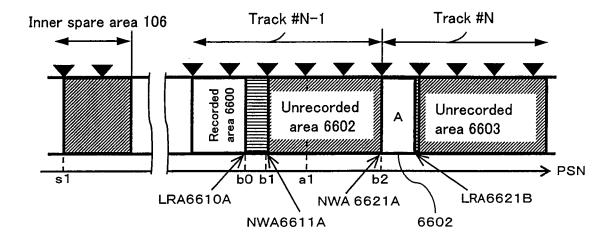


Fig.39B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	7615
0000	a1	0000	b2]

Fig.40A

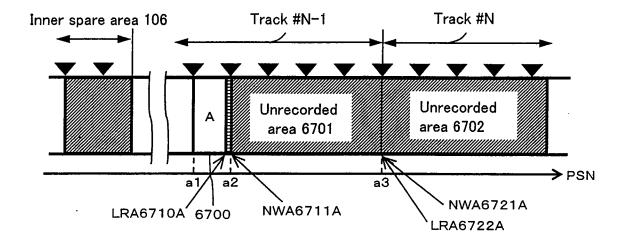


Fig.41A

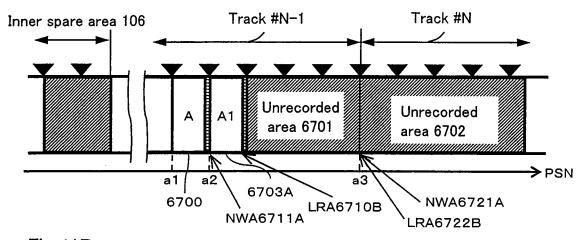


Fig.41B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	6730
0000	a1	0000	a2	γ

Fig.42A

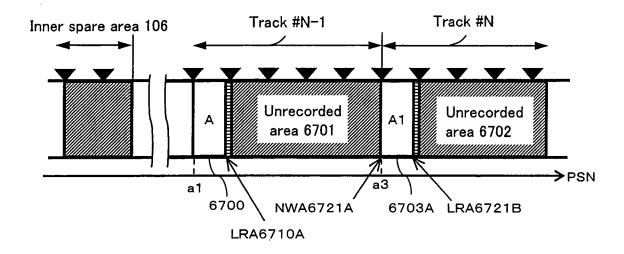


Fig.42B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	_/ 6733
0000	a1	0000	а3	ľ

Fig.43

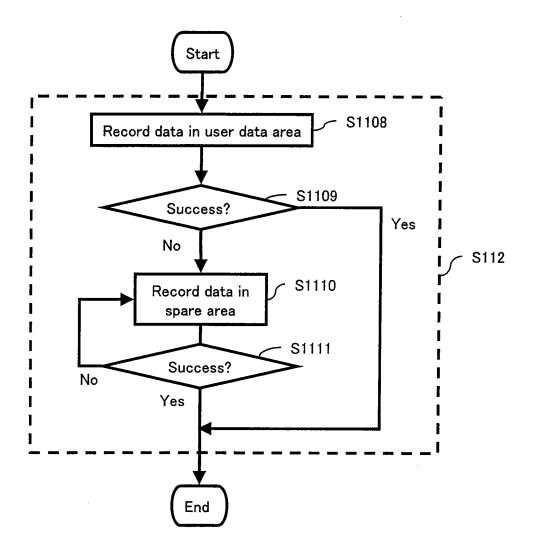


Fig.44A

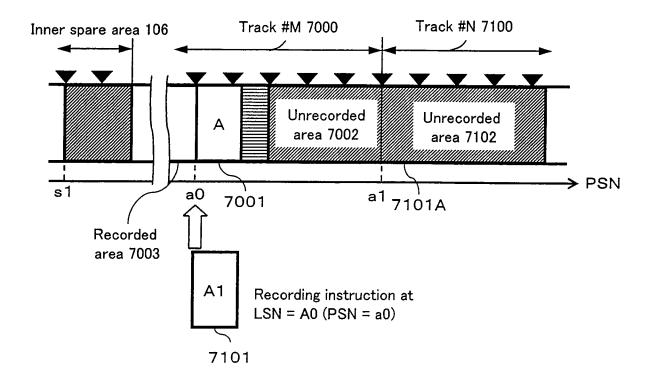


Fig.45A

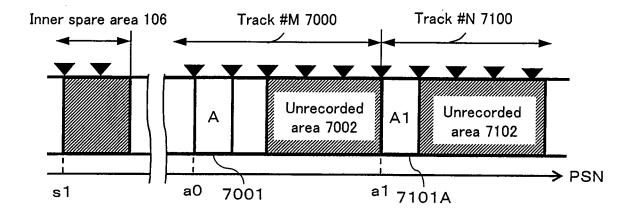


Fig.45B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	<i>~</i> 7200
0000	aО	0000	a1	1200

Fig.46A

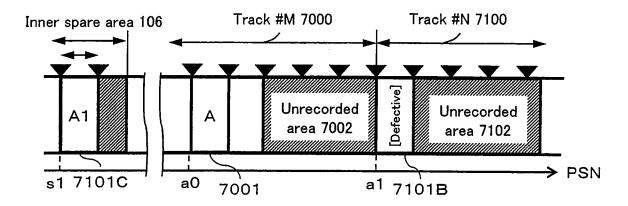


Fig.46B

Status 1 2011A	Defective cluster first PSN 2012	Status 2 2011B	Replacement cluster first PSN 2013	7201
0000	a0	0000	s1	/

Fig.47

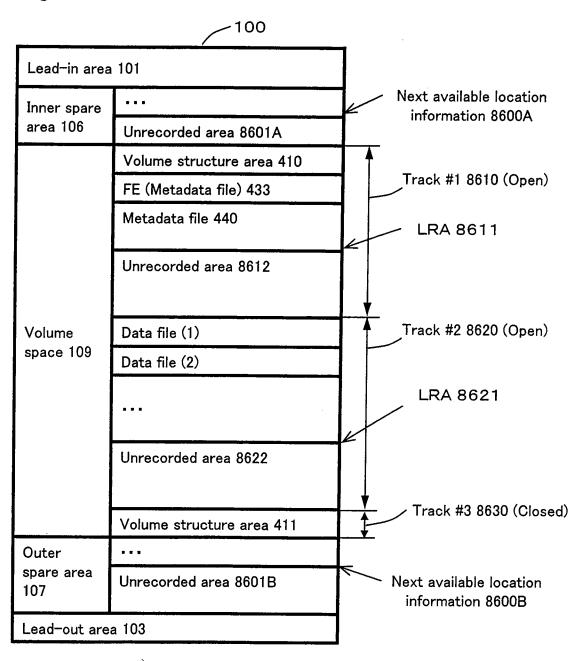


Fig.48

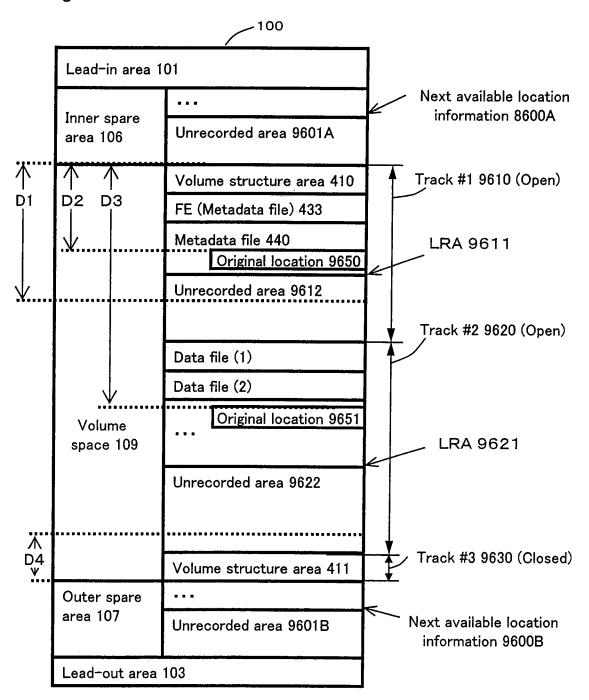


Fig.49A

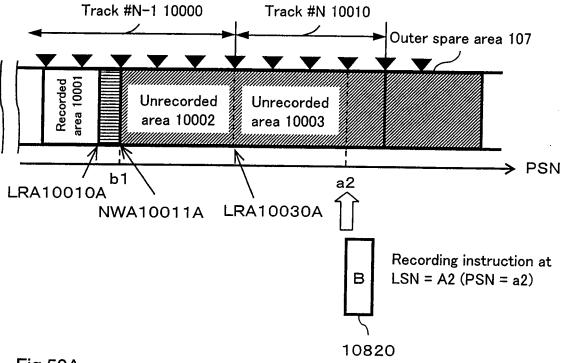


Fig.50A

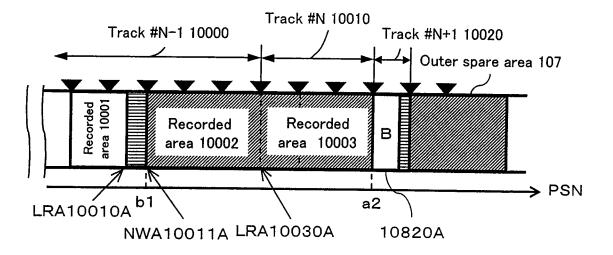


Fig.51A

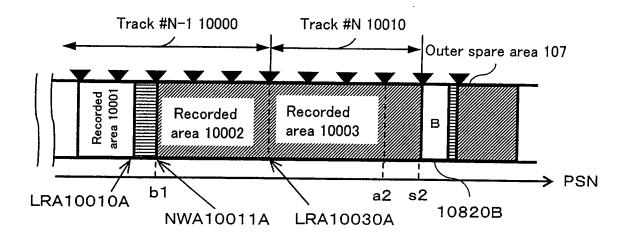


Fig.51B

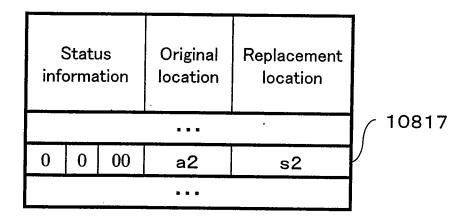


Fig.52A

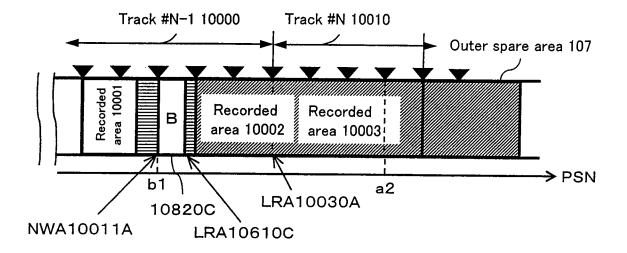


Fig.52B

	atus orma	tion	Original location	Replacement location	
					/ 10819
0	1	00	b1	0	10818
0	0	00	a2	b1	

Fig.53A

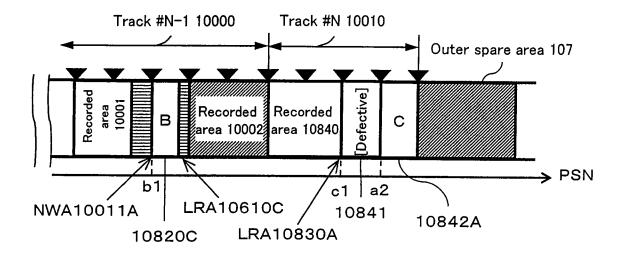


Fig.53B

	Stat	us ation	Original location	Replacement location	
					/ 10819
0	0	00	b1	0	10820
0	1	00	c1	a2	1081
0	1	00	a2	b1	

Fig.54

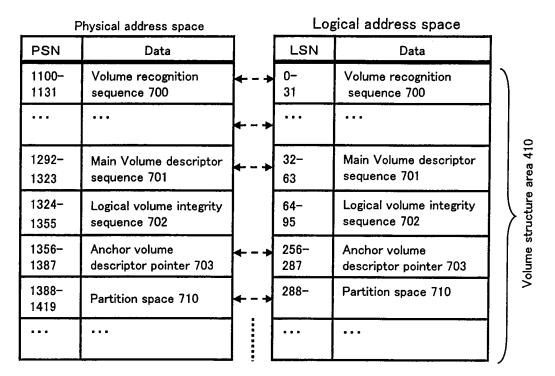


Fig.55

PSN	Data]	LSN	Data
1100- 1131	Volume recognition sequence 700		0- 31	Volume recognition sequence 700
•••		4 *	•••	
1292- 1323	[Defective]		32- 63	Main Volume descriptor sequence 701
1324- 1355	Main Volume descriptor sequence 701		64- 95	Logical volume integrity sequence 702
1356- 1387	Logical volume integrity sequence 702		256- 287	Anchor volume descriptor pointer 703
1388- 1419	[Defective]		288-	Partition space 710
1420- 1451	Anchor volume descriptor pointer 703	 	•••	
1452- 1483	Partition space 710	 		<u> </u>
* * *	•••	,		

Fig.56

